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10/656,313	09/05/2003	Harald Bauer	2002DE130	8221

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CLARIANT CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
4000 MONROE ROAD  
CHARLOTTE, NC 28205

EXAMINER
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HUANG, MEI QI

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

10/656,313

Applicant(s)

BAUER ET AL.

Examiner

Mei Q. Huang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09/05/03, 02/17/04, 03/05/04, 03/24/04, 0.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 6-16, 18-20 and 24-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 17, 21-23 and 40-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-23 and 39-42, drawn to a pulverulent flame-retardant composition, classified in class 252, subclass 601.
  - II. Claims 24-26, drawn to a process of making the flame-retardant composition, classified in class 252, subclass 1+.
  - III. Claims 27-38, drawn to a molding composition comprising the flame-retardant composition, classified in class 524, subclass 126.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process with different operating parameters such as, different temperatures and retention time.
3. Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a coating composition

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to a fiber substrate for the purpose of flameproof and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Whereas invention II relates to a process for making a flame-retardant composition, invention III relates to an article made from the flame-retardant composition. Clearly, the two inventions have different functions and different effects. The process of invention II can not be used to make the article of invention III. As such, they are unrelated. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as show by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II or III, restriction for examination purposes as indicated is proper.

7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

8. This application contains claims directed to the following patentably distinct species of the claimed invention: (i) various organophosphorus flame retardant components as described in Claims 2-7 and further comprised components as described in Claims 8-16; (ii) various dust-reduction additives as described in Claims 17-20.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claims 1, 2, 4, 10, 11, 12, 14-17 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

9. During telephone conversations with Attorney, Mr. Anthony A. Bisulca, on December 22, 2004 and January 7, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-23, 39-42 wherein the elected species for the organophosphorus flame retardant component is formula (I) as described in Claim 2; the elected species for the dust-reduction additive is alkylalkoxylates as described in Claim 17, Specification Page 6, line 28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-16, 18-20, and 24-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Specification***

11. The disclosure is objected to because of the following informalities:

"akylalkoxylates" on Specification Page 6, line 28, should be changed to "alkylalkoxylates". Appropriate correction is required.

***Claim Objections***

12. Claim 23 is objected to because of the following informalities: Examiner believes that "1:999" is a typo and should be changed to "1:99". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

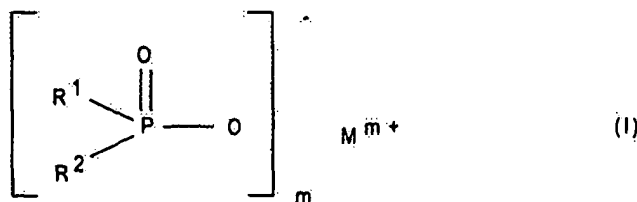
16. Claims 1-5, 17, 23, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenewein et al. (US Pat. 6,365,071 B1) in view of Pullen et al. (US Pat. 6,124,366).

The prior art to Jenewein et al. relates a synergistic flame retardant combination for thermoplastic polymers (Abstract). Jenewein et al. teach a flame retardant combination comprising a phosphinic salt but are silent as to the component of dust-reduction agent. The prior art to Pullen et al. teaches chemical additives to assist in dust reduction in an aqueous fluid useful for the suppression of dust and the enhancement of the wetting characteristics of a surface (Abstract and column 2, line 65-66). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Hence, as disclosed by Pullen et al., a person of ordinary skill in the art would have recognized that suitability of utilizing a chemical additive in a fluid to assist in dust reduction. Furthermore, as evidenced by Pullen et al., a person of ordinary skill in the art would accordingly have had a reasonable expectation of success of utilizing a chemical

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additive in a fluid to suppress dust generation. The Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate a chemical additive, as taught by Pullen et al., in Jeneweine et al.'s flame retardant composition to assist in dust reduction.

As to Claims 2-5, Jeneweine et al. teach that the flame retardant combination comprises a phosphinic salt of the formula (I),



Wherein R<sup>1</sup> and R<sup>2</sup> are C<sub>1</sub>-C<sub>6</sub> alkyl, preferably C<sub>1</sub>-C<sub>4</sub> alkyl, and are linear or branched, examples being methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, n-pentyl; or phenyl (column 2, line 1-22) as required by the limitations of the organophosphorus flame retardant component in Claims 2, 4 and 5. Jeneweine et al. further disclose that M, in formula (I), is calcium ions, aluminum ions, zinc ions, preferably aluminum ions (column 2, line 34-35) as required by Claim 3.

As to Claim 17, Pullen et al. further disclose that conventional surfactants used in dust abatement can be used such as anionic, and nonionic surfactants (column 4, line

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51-53) wherein the nonionic surfactants are ethoxylated linear alcohols with 7-9 moles of ethylene oxide as required by Claim 17.

As to Claims 23 and 42, Pullen et al. also teach that ethoxylated linear alcohols will be used in the range of about 2-5% (column 5, line 2-4).

17. Claims 21-22 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenewein et al. (US Pat. 6,124,366) in view of Pullen et al. (US Pat. 6,124,366) and further in view of Gareiss et al. (US Pat. 6,084,012).

The prior arts to Jenewein et al. and Pullen et al. are adequately presented in paragraph 16 above and are incorporated herein by reference.

As to the limitations of the median particle size in Claims 21 and 40, Jenewein et al. disclose that the flame-retarding components can be incorporated into polymer molding compounds by, for example, premixing all of the constituents, as *powders and/or granules*, in a mixer (column 7, line 5-8). Although Jenewein et al. disclose the physical form of their flame retardant composition but do not specify the average particle size and bulk density. The prior art to Gareiss et al. relates to a flame resistant thermoplastic molding material comprising (A) a thermoplastic polymer, (B) red phosphorus, and (C) other additives (Abstract). Gareiss et al. teach that the mean particle size of the phosphorus particles distributed in the molding compositions is usually up to 2mm, preferably from 0.0001 to 0.5 mm (0.1 to 500  $\mu\text{m}$ ) (column 7, line 30-32) as required by Claim 21. Gareiss et al. further teach, in their working examples,

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that the mean particle size of the phosphorus is 45  $\mu\text{m}$  (column 13, line 39) as required by Claim 40.

As to the limitations of the bulk density in Claims 22 and 41, both Jeneweine et al. and Gareiss et al. are silent as to the bulk density of the flame-retardant composition. However, given the substantially identical flame-retardant composition between the prior arts and the present invention, it is the examiner's position to believe that the prior art composition must inherently possess the same bulk density. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

### ***Priority***

18. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on September 6, 2002. It is noted, however, that applicant has not filed a certified copy of the 10241374.6 application as required by 35 U.S.C. 119(b).

### ***Conclusion***

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. The following references have been cited to show the state of the art with respect to the study of flame retardant compositions and dust reduction additives:

US Pat. Pub. 2004/0176510 A1 to Geprags

US Pat. 6,716,899 to Klatt et al.

US Pat. 5,879,920 to Dale et al.

US Pat. 5,958,287 to Pullen


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mei Q. Huang whose telephone number is (571) 272-3549. The examiner can normally be reached on 8am - 4pm, Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mei Q. Huang  
Examiner  
Art Unit 1713

January 18, 2005

  
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